

**LPDES PERMIT NO. LA0123951 (Agency Interest No. 141373)**

**LPDES STATEMENT OF BASIS  
FOR THE DRAFT LOUISIANA POLLUTANT DISCHARGE ELIMINATION SYSTEM  
(LPDES) PERMIT TO DISCHARGE TO WATERS OF LOUISIANA**

- I. Company/Facility Name:** Tiger State Ethanol, LLC  
Lake Providence Ethanol Facility  
1890 Hudson Circle, Suite 6  
Monroe, Louisiana 71201
  
- II. Issuing Office:** Louisiana Department of Environmental Quality (LDEQ)  
Office of Environmental Services  
Water Permits Division  
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**Date Prepared:** May 9, 2008

LAC 33:IX Citations: Unless otherwise stated, citations to LAC 33:IX refer to promulgated regulations listed at Louisiana Administrative Code, Title 33, Part IX.

40 CFR Citations: Unless otherwise stated, citations to 40 CFR refer to promulgated regulations listed at Title 40, Code of Federal Regulations in accordance with the dates specified at LAC 33:IX.4901, 4903, and 2301.F.

**IV. Permit Action/Status:**

**A. Reason For Permit Action:**

First time issuance of a Louisiana Pollutant Discharge Elimination System (LPDES) permit for a 5-year term following regulations promulgated at LAC 33:IX.2711/40 CFR 122.46.

In order to ease the transition from NPDES to LPDES permits, dual regulatory references are provided where applicable. The LAC references are the legal references while the 40 CFR references are presented for informational purposes

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only. In most cases, LAC language is based on and is identical to the 40 CFR language. 40 CFR Parts 401, 405-415, and 417-471 have been adopted by reference at LAC 33:IX.4903 and will not have dual references. In addition, state standards (LAC 33:IX. Chapter 11) will not have dual references.

- B. LPDES permit: Initial permit
- C. Application received date: September 13, 2007

**V. Facility Information:**

- A. Location – Within the Lake Providence Port, and east of Highway 65, Near Lake Providence, East Carroll Parish (Latitude 32°44'33", Longitude 91°09'56").

- B. Applicant Activity -

According to the application, Tiger State Ethanol, LLC, is a proposed dry mill ethanol production facility that proposes to produce 110 million gallons per year of denatured, fuel-grade ethanol from grain.

The grain will be sent to milling, cooled and routed to the fermentation unit to produce ethanol. The produced 190-proof ethanol will be distilled and dehydrated to form 200-proof ethanol. A denaturant will be added to render the ethanol non-drinkable. The final product will be stored in internal floating roof tanks and shipped to customers via truck/rail/barge. A by-product of the process, Dry Distiller's Grains and Solubles, will be shipped off-site and sold as animal feed. The CO<sub>2</sub> by-product will be piped to an adjacent purification plant.

- C. Technology Basis - (40 CFR Chapter 1, Subchapter N/Parts 401, 405-415, and 417-471 have been adopted by reference at LAC 33:IX.4903)

Ethanol Production (SIC Code 2869) is generally covered under the Organic Chemicals, Plastics, and Synthetic Fibers (OCPSF) Guideline at 40 CFR 414, Subpart F. However, in accordance with the General Provisions located at 40 CFR 414, Subpart A, the provisions of those guidelines do not apply to any process wastewater discharges from the manufacture of organic chemical compounds solely by the extraction from plant and animal raw materials or by fermentation processes. Since the discharges from Tiger State Ethanol, LLC would fall under this category, the OCPSF Guidelines are not applicable.

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All process wastewater from the facility (with the exception of scrubber wastewater) is proposed to be routed to the city sewer system. However, the facility proposes to discharge process area stormwater to the Mississippi River. For the discharge of process area stormwater, based upon best professional judgement, this Office has established TSS limitations based upon 40 CFR 414 Subpart F.

Other sources of technology based limits:

LDEQ Stormwater Guidance, letter dated 6/17/87, from J. Dale Givens (LDEQ) to Myron Knudson (EPA Region 6).  
Best Professional Judgement

- D. Fee Rate -
1. Fee Rating Facility Type: Minor
  2. Complexity Type: III
  3. Wastewater Type: III
  4. SIC code: 2869

**VI. Receiving Waters:** Mississippi River

Mississippi River:

- A. River Basin: Mississippi River, Segment No.: 070101  
B. Designated Uses: primary contact recreation, secondary contact recreation, fish and wildlife propagation

**VII. Outfall Information:**

Outfall 001

- A. Type of wastewater – The intermittent discharge of scrubber wastewater, boiler blowdown, cooling tower blowdown, filter backwash, and RO reject water
- B. Location – at the point of combined discharge of all utility waters prior to mixing with other waters (Latitude 32°44'36", Longitude 91°09'51").
- C. Treatment – RO reject water will be neutralized
- D. Flow – 0.55 MGD
- E. Receiving waters – Mississippi River

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F. Basin and segment – Mississippi River Basin, Segment 070101

Outfall 002

- A. Type of wastewater – The intermittent discharge of process and non-process area stormwater runoff
- B. Location – at the point of discharge of stormwater to the canal, east to the bank of Hagaman Chute, prior to mixing with other waters (Latitude 32°44'34", Longitude 91°09'49").
- C. Treatment – None
- D. Flow – Intermittent, varies with rainfall
- E. Receiving waters – Mississippi River
- F. Basin and segment – Mississippi River Basin, Segment 070101

Outfall 003

- A. Type of wastewater – The intermittent discharge of hydrostatic test waters
- B. Location – At the point of discharge from the vessels being tested prior to combining with other waters at Outfall 001 or Outfall 002
- C. Treatment – None
- D. Flow – Intermittent flow is variable
- E. Receiving waters – Mississippi River
- F. Basin and segment – Mississippi River Basin, Segment 070101

**VIII. Proposed Permit Limits and Rationale:**

The specific effluent limitations and/or conditions will be found in the draft permit. Development and calculation of permit limits are detailed in the Permit Limit Rationale section below.

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A. PROPOSED PERMIT LIMITS

**Outfall 001** – The intermittent discharge of scrubber wastewater, boiler blowdown, cooling tower blowdown, filter backwash, and RO reject water

| Parameter    | Proposed Permit Limitations |                | Monitoring Freq. | Rationale             |
|--------------|-----------------------------|----------------|------------------|-----------------------|
|              | Monthly Avg mg/l            | Daily Max mg/l |                  |                       |
| Flow         | Report                      | Report         | 1/month          | LAC 33:IX.2707.1.1.b. |
| TOC          | ---                         | 50             | 1/month          | BPJ                   |
| Oil & Grease | ---                         | 15             | 1/month          | BPJ                   |
| pH           | 6.0 (min)                   | 9.0 (max)      | 1/month          | BPJ                   |

**EFFLUENT LIMITATIONS BASIS for Outfall 001:**

**Flow:** The requirement to report flow is based upon LAC 33:IX.2707.1.1.b.

**TOC and Oil & Grease:** Limitations are based upon BPJ and LDEQ's stormwater guidance [letter dated 6/17/87, from J. Dale Givens (LDEQ) to Myron Knudson (EPA Region 6)].

**pH:** Requirements are based upon LAC 33:IX.1113.C.1.

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**Outfall 002** – The intermittent discharge of process and non-process area stormwater runoff

| Parameter    | Proposed Permit Limitations |                | Monitoring Freq. | Rationale                  |
|--------------|-----------------------------|----------------|------------------|----------------------------|
|              | Monthly Avg mg/l            | Daily Max mg/l |                  |                            |
| Flow         | Report                      | Report         | 1/quarter        | LAC 33:IX.2707.1.1.b.      |
| TOC          | ---                         | 50             | 1/quarter        | BPJ                        |
| Oil & Grease | ---                         | 15             | 1/quarter        | BPJ                        |
| TSS          | 67                          | 216            | 1/quarter        | BPJ, 40 CFR 414, Subpart F |
| pH           | 6.0 (min)                   | 9.0 (max)      | 1/quarter        | BPJ                        |

**EFFLUENT LIMITATIONS BASIS for Outfall 002:**

**Flow:** The requirement to report flow is based upon LAC 33:IX.2707.1.1.b.

**TOC and Oil & Grease:** Limitations are based upon BPJ and LDEQ's stormwater guidance [letter dated 6/17/87, from J. Dale Givens (LDEQ) to Myron Knudson (EPA Region 6)].

**TSS:** Limitations for TSS have been established based upon best professional judgement due to the presence of process area stormwater. TSS limitations are also based upon limitations established in an existing permit with similar discharges (LA0123234)

**pH:** Requirements are based upon LAC 33:IX.1113.C.1.

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**Outfall 003 – The intermittent discharge of hydrostatic test water**

| Parameter                   | Proposed Permit Limits |               | Monitoring Frequency | Rationale                |
|-----------------------------|------------------------|---------------|----------------------|--------------------------|
|                             | Monthly Avg            | Daily Max     |                      |                          |
| Flow                        | Report                 | Report        | 1/discharge          | LAC<br>33:IX.2707.1.1.b. |
| pH <sup>(*)</sup>           | 6.0 s.u.(min)          | 9.0 s.u.(max) | 1/discharge          | LAG670000                |
| TSS <sup>(*)</sup> (*)      | ----                   | 90 mg/L       | 1/discharge          | LAG670000                |
| Oil & Grease <sup>(*)</sup> | ----                   | 15 mg/L       | 1/discharge          | LAG670000                |
| TOC <sup>(*)</sup>          | ----                   | 50 mg/L       | 1/discharge          | LAG670000                |
| Benzene <sup>(*)</sup>      | ----                   | 50 µg/L       | 1/discharge          | LAG670000                |
| Total BTEX <sup>(*)</sup>   | ----                   | 250 µg/L      | 1/discharge          | LAG670000                |
| Total Lead <sup>(*)</sup>   | ----                   | 50 µg/L       | 1/discharge          | LAG670000                |

- (\*) Benzene, Total BTEX, and Total Lead shall be measured on discharges from pipe or vessel which have been used for the storage or transportation of liquid or gaseous petroleum hydrocarbons. Total Organic Carbon (TOC) shall be measured on discharges from pipelines, flowlines, piping, vessels, or tanks which have previously been in service – i.e., those which are not new. Accordingly, Flow, TSS, Oil & Grease and pH are the only testing requirements for new pipe or vessels.
- (\*) The background concentration of Total Suspended Solids (TSS) will be allowed in the discharge if the effluent is being returned to the same water source from which the intake water was obtained. In these cases, the permit limitations will be 90 mg/L plus the concentration of TSS in the intake water. The TSS concentration of the intake water shall be reported on the Discharge Monitoring Report (DMR) along with the concentration of TSS in the effluent.

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**EFFLUENT LIMITATIONS BASIS for Outfall 003:**

**Flow:** The requirement to report flow is based upon LAC 33:IX.2707.1.1.b.

**TSS, Benzene, Oil & Grease, TOC, Total BTEX, Total Lead and pH:** Limitations are based upon the Hydrostatic Test Wastewater General Permit (LAG670000)

**B. MONITORING FREQUENCIES**

The monitoring frequencies established at all outfalls are considered adequate for the protection of the receiving water and its designated uses as stated in Section VI.7. These frequencies are also consistent with similarly permitted discharges at other facilities and have been applied based on Best Professional Judgment.

**IX. Compliance History/DMR Review:**

N/A -- Tiger State Ethanol, LLC / Lake Providence Ethanol Facility is a proposed site. Therefore, there is no compliance history available.

**X. Endangered Species:**

The receiving waterbody for Tiger State Ethanol is Subsegment 070101 of the Mississippi River Basin. Segment 070101 of the Mississippi River Basin has been identified by the U.S. Fish and Wildlife Service (FWS) as habitat for the Pallid Sturgeon, which is listed as a threatened or endangered species. This draft permit has been submitted to the FWS for review in accordance with a letter dated October 24, 2007 from Boggs (FWS) to Brown (LDEQ). LDEQ has determined that the issuance of the LPDES permit is not likely to have an adverse effect upon the Pallid Sturgeon. Effluent monitoring requirements are established in the permit to ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat.

**XI. Historic Sites:**

The discharge from Tiger State Ethanol will be from a proposed facility. In accordance with the "Memorandum of Understanding (MOU) for the Protection of Historic Properties in Louisiana Regarding LPDES Permits," LDEQ consulted with the State Historic Preservation Officer (SHPO) in a letter dated May 15, 2008, to determine whether construction-related activities could potentially affect sites or properties on or eligible for listing on the National Register of Historic Places. The SHPO provided a response on May 28, 2008, indicating that no known archaeological sites or historic properties will be affected by Tiger State Ethanol

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## **XII. Tentative Determination:**

On the basis of preliminary staff review, the Department of Environmental Quality has made a tentative determination to issue a permit for the discharges described in the application.

## **XIII. Variances:**

No requests for variances have been received by this Office.

## **XIV. Public Notices:**

Upon publication of the public notice, a public comment period shall begin on the date of publication and last for at least 30 days thereafter. During this period, any interested persons may submit written comments on the draft permit and may request a public hearing to clarify issues involved in the permit decision at this Office's address on the first page of the statement of basis.

A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing.

A public notice will be published in a local newspaper of general circulation and in the Office of Environmental Services Public Notice Mailing List.

## **XV. TMDL Waterbodies:**

Tiger State Ethanol, LLC proposes to discharge utility wastewaters and stormwater runoff to the Mississippi River (Segment 070101). Segment 070101 is not listed on LDEQ's Final 2006 303(d) List, as impaired, and to date no TMDLs have been established.

A reopener clause will be included in the permit to allow for the establishment of more stringent effluent limitations and requirements as imposed by any future TMDLs.

## **XVI. Stormwater Pollution Prevention Plan (SWP3) Requirements:**

In accordance with LAC 33:IX.2707.1.3 and 4[40 CFR 122.44(I)(3) and (4)], a Part II condition is proposed for applicability to all stormwater discharges from the facility, either through permitted outfalls, through outfalls which are not listed in the permit or as sheet flow. The Part II condition requires implementation of a Storm Water Pollution Prevention Plan (SWP3) within six (6) months of the effective date of the final permit, along with other requirements. If the permittee maintains other plans that contain duplicative information, that plan could be incorporated by reference into the SWP3. Examples of these type plans include, but are not limited to: Spill Prevention Control and Countermeasures Plan (SPCC), Best Management Plan (BMP), Response Plans, etc. The conditions will be found in the draft permit. Including Best

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Management Practice (BMP) controls in the form of a SWP3 is consistent with other LPDES and EPA permits regulating similar discharges of storm water associated with industrial activity, as defined at LAC 33:IX.2511.B.14 [40 CFR 122.26(b)(14)].